

# CYBERSECURITY TRAINING FOR MULTI-GENERATIONS



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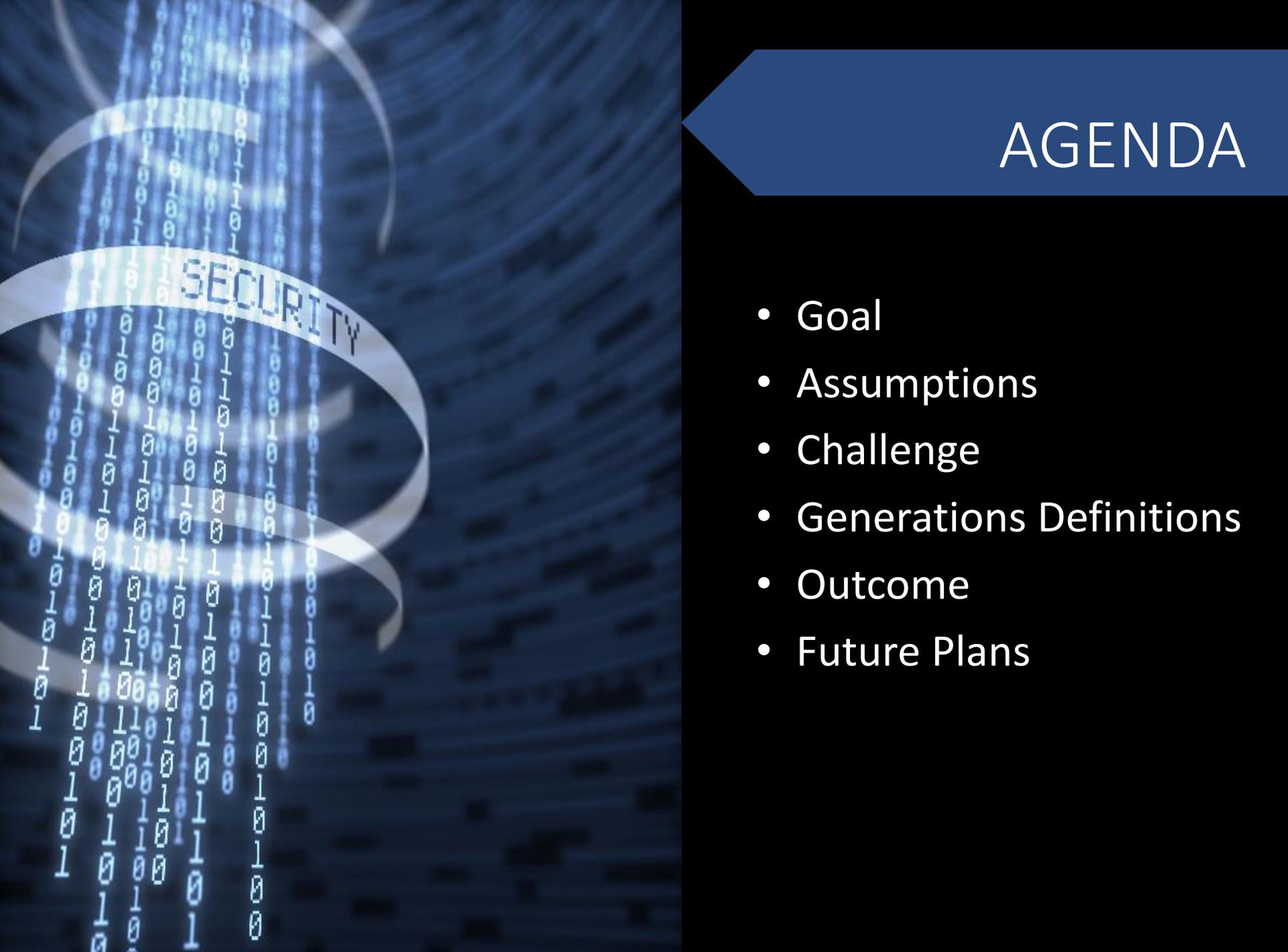
FISSEA 31<sup>ST</sup> CONFERENCE

MARCH 14, 2018



## SPEAKER BACKGROUND

- 25+ years experience in Scientific Programming, Network Management, Security Operations Management, Incident Response Management, Center Privacy Management, and Cyber Security Training Management
- 11 years in academia as Adjunct Professor, Specialized Tutor/Mentor, Lab Director, Consultant, Graduate Program SME
- B.S. Computer Science
- M.Ed. Adult Learning and Development
- Ph.D. Computer Information Systems, Information Assurance
- Management Certificate, University of Notre Dame, Mendoza College of Business
- Certified Expert RMF Professional

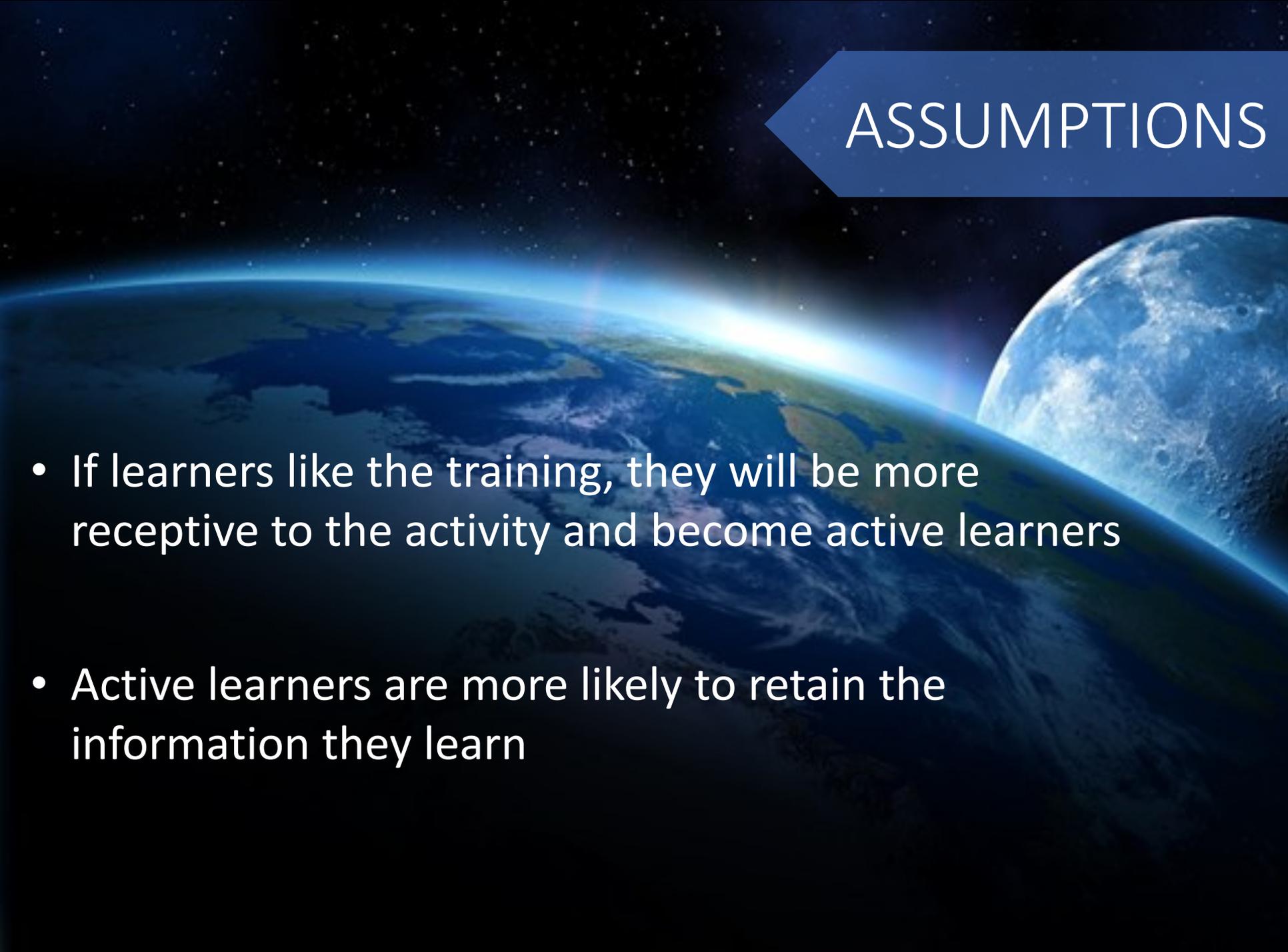


# AGENDA

- Goal
- Assumptions
- Challenge
- Generations Definitions
- Outcome
- Future Plans

# GOAL

- *Develop and deliver quality, cost-effective, interactive training to reduce cyber security risks through change in user behavior.*

A background image of space showing the Earth's horizon on the left and the Moon on the right, with a bright light source creating a lens flare effect between them. The sky is dark with scattered stars.

# ASSUMPTIONS

- If learners like the training, they will be more receptive to the activity and become active learners
- Active learners are more likely to retain the information they learn

A globe of Earth is shown from space, with a network of glowing green lines crisscrossing the planet, symbolizing global connectivity or data flow. The globe is set against a dark blue background with white stars. A blue arrow-shaped banner points from the right towards the globe.

# CHALLENGE

**How do we make training more engaging to the multitude of learners with different learning styles?**

# METHODOLOGY

- Decide on targeted generations
- Decide on the design of training
- Activate survey

# GENERATIONS



Traditionalists  
Pre 1946



Baby Boomer  
1946-1964



Generation X  
1965-1979



Millennial  
1980-1995



# Traditionalists

Pre-1946

- *Lectures*
- *Classroom-live*
- On the job training
- Workbooks and manuals
- Books and reading
- One-on-one coaching
- *No competition with learning*



# Baby Boomer

1946-1964

- *Lectures*
- Classroom instruction-live
- On the job training
- Workbooks and manuals
- Books and reading
- One-on-one coaching
- *No competition with learning*
- *May be insulted by continuous feedback*



## Generation X

1965-1979

- On the job training
- Classroom instruction-live
- Workbooks and manuals
- *Books and reading*
- One-on-one coaching
- *Assessment and feedback*
- Discussion groups
- *Use of games and case studies*



# Millennials

1980-1995

- On the job training
- Classroom instruction-live
- Workbooks and manuals
- Books and reading
- One-on-one coaching
- *Immediate and continuous feedback*
- *Gaming*
- Mobile/Tech Savvy
- *Competition in Learning*

# Generation Learning Styles / Techniques

Learning Style	Design Technique
Lecture	Slides, Video
Books and reading	Slides
Case studies	Scenario Videos
Competition in learning	Games
Immediate/Continuous Feedback	Games
Assessment and feedback	Quizzes, Exams, Games

# OUTCOME

## Hybrid Training Offering

- Live (F2F)
  - Slides
  - Narrative Situational Videos
  - Gaming (Competition)
  - Surveys provided
- Online
  - Slides
  - 3 Animated Videos
    - Video Scribes
  - 1 Situational Video
  - *Gamification (quizzes)*\*\*\*
  - Surveys provided

# 2018 TRAINING

## TABLE OF CONTENTS

-  Information Security Overview
-  Physical Access Control
-  Cybersecurity Threats and Best Practices
-  Foreign Travel and Counterintelligence Threats
-  Remote Security
-  Mobile Device Security
-  Privacy Information

Information Security Overview

## Privacy



## Insider Threats



## Remote Access Security

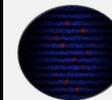


Questions: 7 Response Mode: None/Slammers

## Billionaire



## ENCRYPTION



The **encryption** process uses math to "scramble" data so it is unreadable by unauthorized persons. To unscramble the encrypted data, an encryption "key" is needed to change the information back to its original, read readable form.

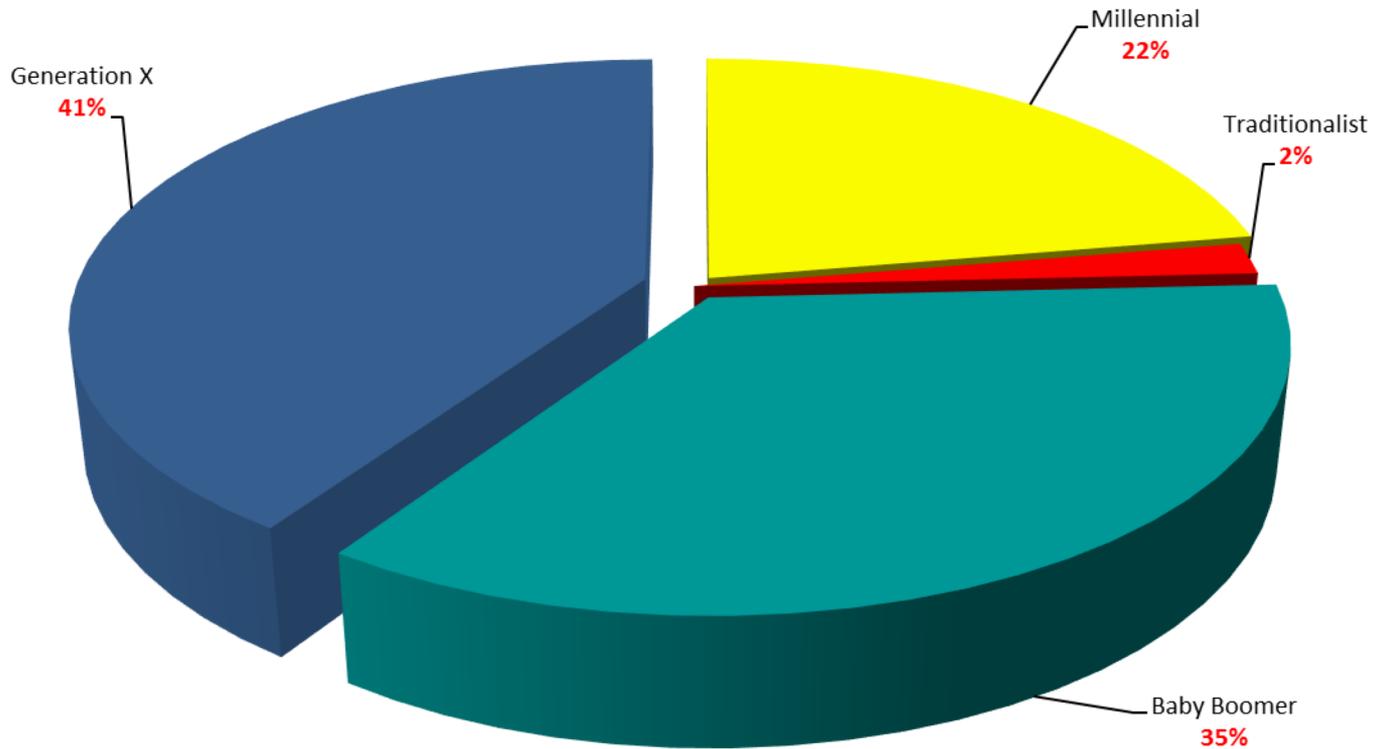


Encryption is important because it allows you to securely protect data that you don't want anyone else to have access to. It is used to protect corporate secrets, secure classified information, and individuals use it to protect personal information to guard against things like identity theft.

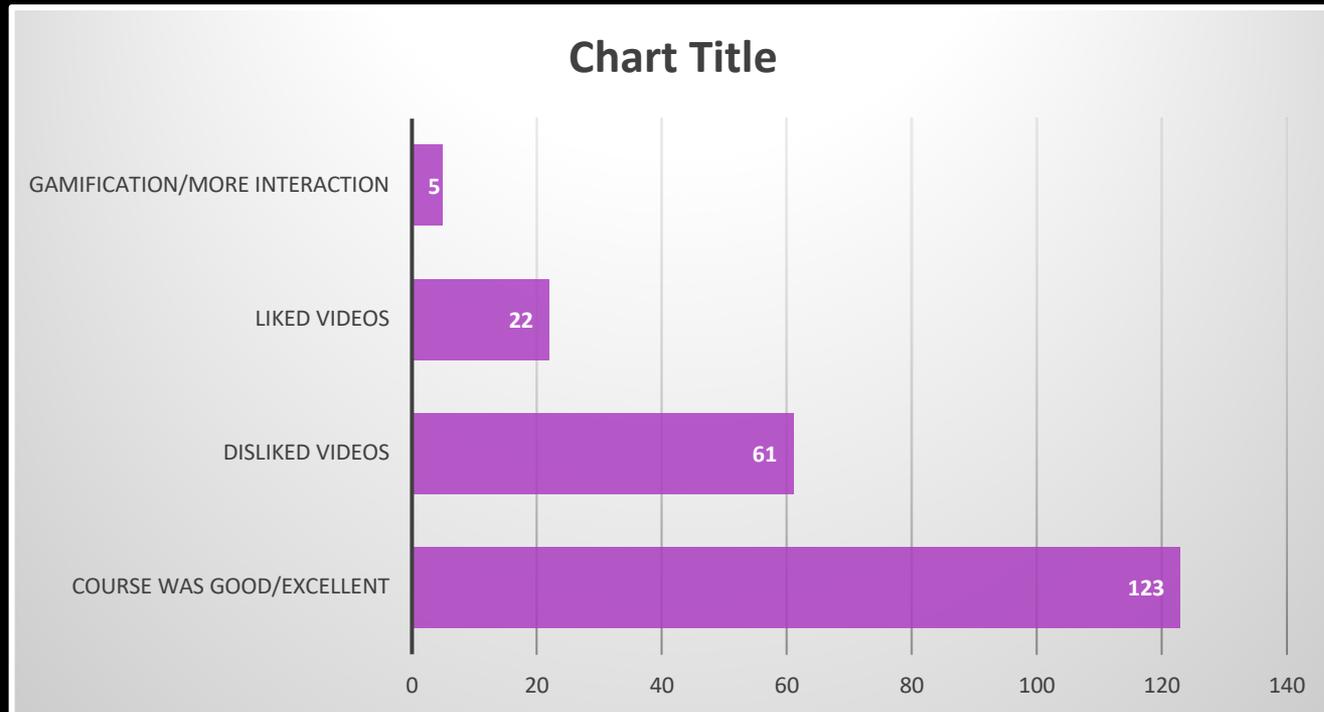
Physical Access Controls

# DISTRIBUTION

## NASA CIVIL SERVANT AGE DISTRIBUTION

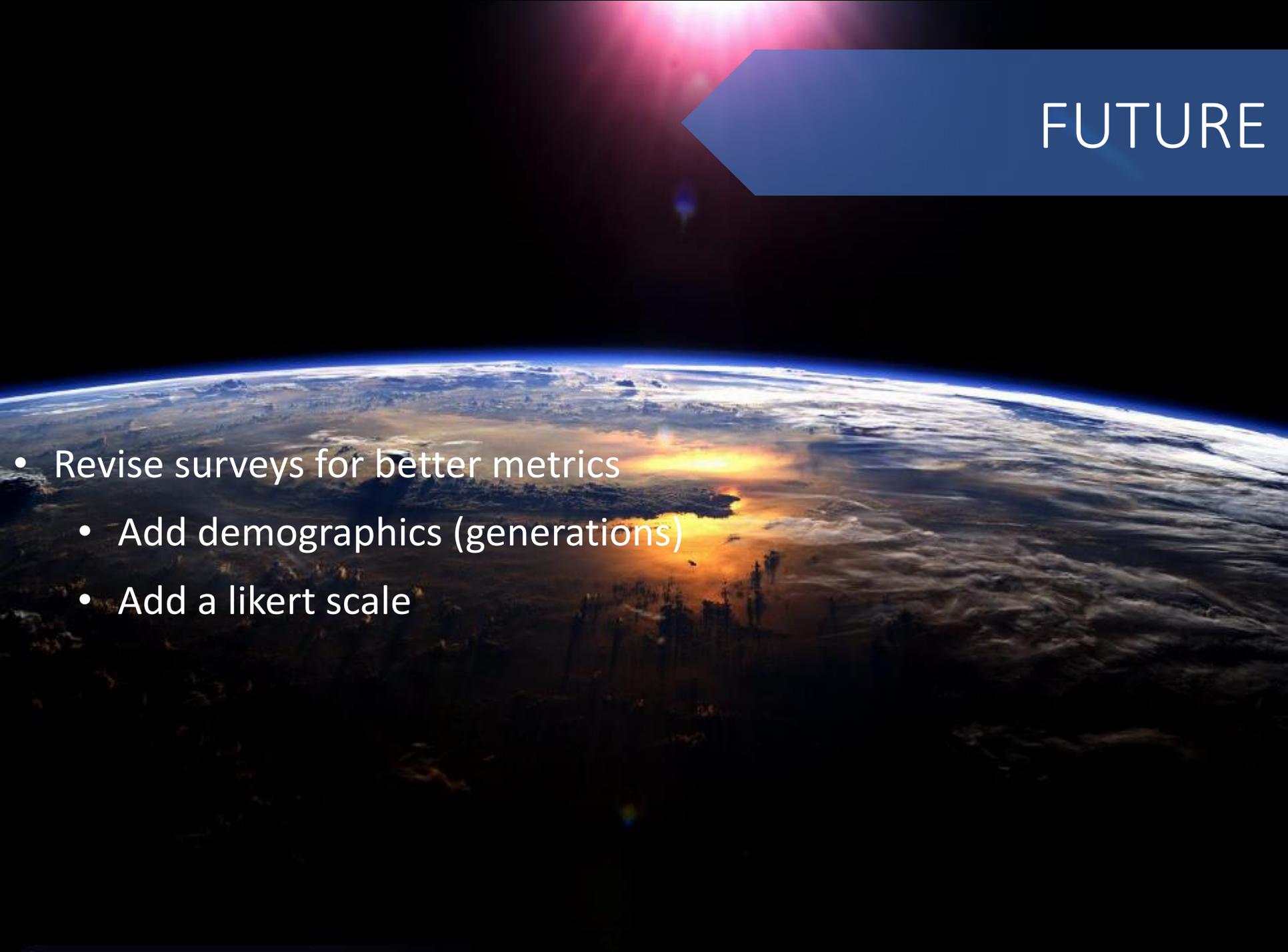


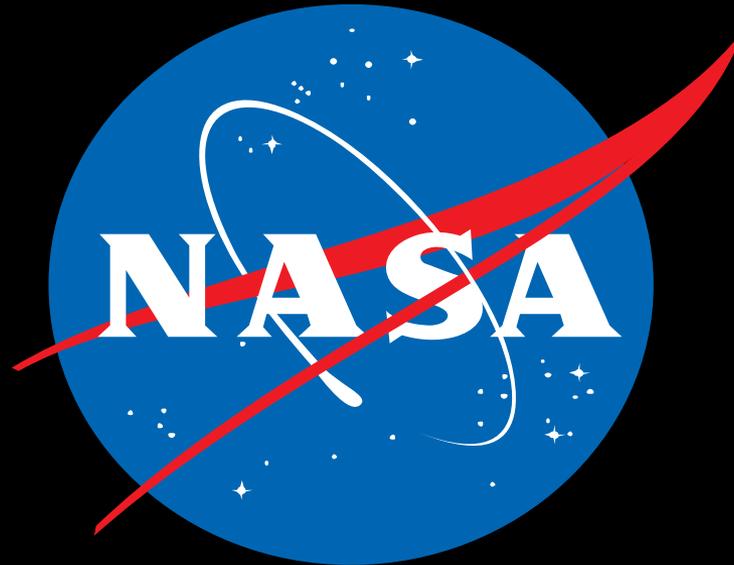
# SURVEY RESULTS





# FUTURE

- 
- Revise surveys for better metrics
    - Add demographics (generations)
    - Add a likert scale



Thank You!

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# ADDITIONAL COMMENTS

- “The training this year is improved over previous years”
- “Training was improved from last year.”
- “I believe the supplemental videos were very helpful in stressing the critical importance of maintaining information security for NASA data.”
- “I think the courses may lean too much to on-line courses to eliminate regular classes. I find I take away more with general interaction of people when a presentation [is] given by someone.”
- “more charts”
- “Perhaps offer as a live class in the auditorium (as an alternative)”
- “Use a virtual reality headset to make it more interactive”
- “...make the videos optional, with written material as the other option”
- “I would like to forward the course home so my wife can take it! Everyone has to step up [their] IT security!”
- “fewer videos, more text would be helpful”